

HELPING MORE STUDENTS WITH DISABILITIES PREPARE FOR COLLEGE: A REVIEW OF RESEARCH LITERATURE AND SUGGESTED STEPS GEAR UP GRANTEES CAN TAKE

Helping More Students with Disabilities Prepare for College

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a new national initiative to encourage more young people to have high expectations, stay in school, study hard and take the right courses to go to college. An important part of GEAR UP is to provide technical assistance to help prepare more students with disabilities for college. Students with disabilities are underrepresented in colleges and universities nationwide for a variety of reasons, including barriers that have traditionally prevented students with disabilities from transitioning from high school to college. This paper gives you a brief review of the research available to students, parents, teachers, college faculty and service providers about what those barriers are that have prevented large numbers of students with disabilities who could attend higher education institutions from going to college.

Federal legislation, such as the Americans with Disabilities Act of 1990 (ADA), the Individuals with Disabilities Education Act, as amended (IDEA), and the Rehabilitation Act of 1973, as amended, require schools to provide physical and program access for students with disabilities not only in elementary, middle, and high schools but also in colleges and universities throughout the nation. However, barriers that limit people with disabilities from going to college and successfully graduating continue to exist. These barriers are discussed in this paper.

Discussion of How College Affects Students

Adjustment to college life for students with disabilities poses two basic challenges. College-age students with and without disabilities are faced with a new physical and social environment usually away from their social support systems that presents significant challenges

to this adjustment. These typical and well-documented adjustments are compounded for students with disabilities because such students are faced with unique barriers to entering college and persisting to graduation. These barriers may be architectural, preventing students who use wheelchairs from accessing buildings and facilities, or lack of adequate support services to negotiate the complexities of such tasks as scheduling courses in inaccessible buildings, or attitudinal perceptions about students with disabilities by faculty, staff, and their non-disabled peers. Furthermore, as the review of the literature presented here clearly shows, there is little research available for the scholar/practitioner to draw a research-based application to improving the physical, social, and attitudinal aspects of the college and university student experience for students with disabilities.

The number of students with disabilities transitioning from secondary to postsecondary institutions is increasing. The American Council on Education (Henderson, 1999) found in a 1998 study that higher proportions of students with disabilities were enrolling in four-year colleges and universities in 1998 than they had in the recent past. The general population of people with disabilities constitutes the largest minority group in the United States, affecting one-fifth of all Americans. One in eleven first-time, full-time freshmen entering college in 1998 self-reported a disability¹. This translates to about 9 percent of all first-time, full-time students enrolled fall 1998 or about 154,520 students who reported disabilities described as hearing, speech, orthopedic, learning, health-related, partially sighted or blind, or other conditions (Henderson, 1999).

¹ Since 1966, a national survey of college students has been administered to a large sample of college freshmen each year. This survey is administered by the Cooperative Institutional Research Program and is cosponsored by the American Council on Education and the Graduate School of Education of the University of California at Los

Literature Review Framework

The review of the literature presents a foundation in the leading theories of college student adjustment to college life. This literature presents the foundation models of student success and applies the literature to the limited, often single-site studies, of college students with disabilities. This information provides you with a review of some theories and research about how college affects students and how these theories and research may be applied to learning more about the experiences of college age students with disabilities. The theories discussed below are the leading theories of how college affects students researched in the field of higher education. However, little research about college students with disabilities has been done, which limits what we specifically know about college students with disabilities.

Theories and Models of Student Change in College

Attending a college or university dramatically changes how people who attend college develop personally and intellectually. An understanding how all students change as a result of attending college is fundamental to understanding and comparing the experiences of college students with disabilities and the profound consequences of not attending college for people with disabilities that are unable to attend because of physical, social, and other barriers preventing them from integrating into the campus academic and social life.

Since the late 1960s and early 1970s, significant theoretical development of student change has been advanced in the field of higher education. Two significant general theoretical constructs of student change exist in the literature on how college affects students. These two theories are developmental theories and college impact models. Developmental theories address the nature, structure, and processes of individual human growth, and typically describe the

dimensions of student development and the phases of individual human growth along each dimension. The college impact models focus on the environmental and sociological factors that impact how students change.

College impact models of student change believe that environmental (e.g., the characteristics, social life, academic life, housing, etc.) and sociological factors influence how college students grow in every aspect of their lives, including preparation for careers and personal life. College impact models concentrate not so much on any particular internal process or dimension of student change as on the process and origins of change (Pascarella & Terenzini, 1991).

The three college impact models of significant importance are Astin's Theory of Involvement (Astin, 1970), Tinto's Theory of College Persistence and Withdrawal Process (Tinto, 1975, 1987) and Pascarella's general model for assessing change (Pascarella, 1985). Astin (1970) proposed one of the earliest college impact models. According to Astin (1985), his theory can be stated simply as "students learn by becoming involved." Astin (1985) assigns the institutional environment a critical role because a college campus affords students a greater number and variety of opportunities for encounters with new ideas, different people, and new thinking about the world. Astin believed students play a central role in these experiences. The student must actively exploit the opportunities presented by the campus environment for a successful university or college experience. According to Astin (1970), development or change is not seen merely as the consequence of collegiate impact on a student. Rather, the individual plays a central role in determining the extent and nature of growth according to the quality of effort or involvement the student actively pursues and becomes involved with the resources provided by the institution.

Tinto (1975, 1987) theorized that students enter a college or university with varying degrees of personal, familial, and intellectual abilities and characteristics, including initial dispositions and intentions with respect to college attendance and personal goals. These intentions and commitments are subsequently modified and reformulated on a continuous basis as the student interacts with others and is impacted by the social and academic constructs of the college or university. Positive encounters with the formal and informal academic and social environments of an institution are hypothesized to lead to greater integration in college and university academic and social communities and thus to increased likelihood of student retention and persistence to graduation. Conversely, negative experiences, both formal and informal, decrease the likelihood of integration into academic or social communities of the campus, leading to the student's marginalization and increasing the likelihood that a student will drop out and not graduate.

Pascarella (1985) proposed a general causal model that includes a more explicit consideration of an institution's structural characteristics and its general social and academic environment. Pascarella suggests that growth is a function of the direct and indirect effects of five major variables. Two of the variables are the students' background and precollege characteristics, and the structural and organizational features of the institution (e.g., selectivity, residential environment, campus size, etc.) that together shape the third variable set, which is the overall college or university character. These three clusters of variables, in turn, influence a fourth cluster that involves both the frequency and content of students' interactions with the major socializing agents on campus—the faculty and other students. Quality of effort, the fifth variable, is shaped by students' background traits, by the general institutional environment, and by the normative influences of peers and faculty members.

Astin's theory (1970) is the leading perspective of all college impact models and has paved the way for the development of later models in higher education research. Tinto's theoretical work (1975, 1987), although it focused primarily on the college attrition (dropping out) process, offered opportunities to researchers for further inquiry into how college impacts students and the gradual process of change that occurs over the years of attendance. These three theoretical models and subsequent research of how college affects students is applied to the impact of college on traditional college-age students with disabilities.

These three theories have several elements in common. College impact models assign a prominent and specific role to the context in which the student acts and thinks and one of the contexts is the college environment. College impact models see students as active participants in their own growth. The campus environment is seen as an active force that provides a variety of opportunities for change making encounters that range from new ideas to personal relationship building experiences. Thus, change is influenced not only by whether and how the student responds, but also by the nature and intensity of the entire campus environment. Specification of potential areas of variation in campus environments is a main characteristic of college impact models. Institutional structures, policies, programs, and services (both academic and social), as well as the attitudes, values, behaviors and norms of the people who occupy and to some extent define what the college campus environments will be like, are all seen as potential sources of influence in students' cognitive and affective changes.

There is ample research based on these theories now available that shows students do change in a number of ways during college years (Pascarella & Terenzini, 1991). Many of these changes are independent of what students are like when they enter college. The evidence also strongly suggests that the nature and origins of these changes are psychological and sociological.

These theories and the studies based on these theories suggest that college and university campuses constitute powerful and highly varied settings for student change (Pascarella & Terenzini, 1991).

It is important to understand that the present theories and models are developed for traditional-age undergraduates, that is, students between 18 and 22 years of age. Researchers emphasize that considerable uncertainty exists about the usefulness of these theories with non-white and minority students (Pascarella & Terenzini, 1991). The evolving character of higher education's student body, specifically the growing number of minority groups, older students, and students with disabilities, raises questions about the universal applicability of these theories and models. The impact of college on students with disabilities remains virtually unknown and constitutes a gap in what we know about how college changes people with disabilities, which leads to better quality of life. This discussion sets the foundation to be able to explain a small piece of the puzzle related to college impact on students with disabilities by studying the impact of college environments on the academic and social life of students with disabilities.

From the perspective of the theories and models of institutional impact summarized here, the power of colleges and universities for influencing student change and growth appears to lie in the exposure they afford their students to substantial increases in cultural and economic capital through presenting opportunities to explore, peer and adult models to emulate, and experiences that challenge currently held values, attitudes, and beliefs. College impact models provide the broad theoretical framework for exploring college or university life of students with disabilities.

Some of the Research on College Students with Disabilities

Numerous studies have been conducted in the area of postsecondary education and students with disabilities. Studies have been conducted about disability policy development and

implementation (Howman, 1994; Zavos, 1995); in the area of university disability services (Allison, 1994; Moore, 1995); and in career development and career goals of students with disabilities (Ryan & Harvey, 1999; Conyers, 1996; Johnson, 1994). However, the purpose of this literature review is to examine the university life experience of students with disabilities. Therefore, only studies related to student experiences; studies about academic and social integration of students with disabilities; studies related to awareness and attitudes toward students with disabilities; and studies that used qualitative methods are detailed.

Adjustment to a new social and physical environment for students with disabilities, particularly for students with visible disabilities, without the familiar support system structure they previously relied on is often a big part of attending college. Though the daily life tasks of most adults may be quite similar, those of individuals with a disability are more complicated (Graham, Weingarden, & Murphy, 1991). As a result, Appleby (1994) found that nearly one-half of college students with disabilities seek personal counseling services, and that the availability of various support services should differ from services of students without disabilities as the types of issues that are related to their transition and adjustment can be quite different from the adjustment of students without disabilities due to physical and attitudinal barriers.

Although Mulcahey (1992) interviewed high school students who sustained a disability while in high school, her findings lend to the understanding of college-age students with disabilities. Particularly because there are few studies reported about the university life experience of college students with disabilities. The results suggested that returning to pre-injury academic environments and peer groups was found to be very difficult and also implied that both the adolescents with spinal cord injuries and the environments to which they returned may be ill-

prepared for reentry. The four adolescents in the school revealed a major gap between federal laws requiring accessibility (at that time the primary law was the Rehabilitation Act of 1973, as amended, and the newly effective ADA) and the real world of little effort to fully comply and thus give full integration. The adolescents' responses also implied that the human and bureaucratic support system in the school environment was inadequate for successful return to school. Mulcahey's study (1992) exclusively dealt with the experience of returning to school after sustaining a disability. Her study dealt with a specific aspect of returning to a pre-injury school environment that the students had once attended before sustaining the disability.

A case study by Synatschk (1994) examined the experiences college students with learning disabilities who graduated from college. Henderson (1999) reported that between 1988 and 1998, the fastest-growing category of reported disability among college students was a learning disability. The purpose of these studies was to determine factors and processes that were perceived as influential in successful adjustment from high school to college. Results indicated that the interaction of the perceptions of life-event stressors, individual abilities, and disability-type influenced actions taken by successful college students with learning disabilities. The students expressed a conflict between their desire to be independent and their desire to use services and accommodations available to them. A comprehensive study conducted by Fairweather and Shaver (1990) supports the dilemma of student independence and need for support services. However, students with disabilities often require support services more frequently and earlier in their academic career than do students without disabilities. Fairweather and Shaver (1990) found that even if the institution can provide the necessary services, the student might drop out before the student's need for such services are known.

Other research has been conducted about how students with learning disabilities adjust to college life. Houck, Asselin, Troutman, and Arlington (1992) reviewed studies that investigated expectations of college faculty for students with learning disabilities (Miner & Prater, 1984). Knowledge of and attitudes toward accommodations for college students with learning disabilities (Nelson, Dodd, & Smith, 1990) demonstrated that student service professionals expressed a highly positive attitude toward service delivery for students with learning disabilities, but the faculty response was more negative. One reason faculty may be more negative is because they feel they need more information about students with learning disabilities (Houck, et al., 1992). The positive finding of the research showed that even though faculty might be less than knowledgeable about students with disabilities; faculty also believed that students with learning disabilities were able to complete their degrees and graduate.

Vogel, Hruby, and Adelman (1993) studied students with learning disabilities who had graduated from college and compared these students with students with learning disabilities that had been dismissed from college because of academic failure. The graduates took more rigorous high school courses and received more guidance and instructional assistance in high school than non-graduates. These results suggest that prior education, motivation, extended time, and use of accommodations could enhance college success for students with learning disabilities.

The study conducted by Fairweather and Shaver is the most complete analysis of students with disabilities transitioning from high school to college. The study identifies several implications for students and institutions based on data collection in the National Longitudinal Transition Study of Special Education Students concerning participation of students with disabilities in postsecondary programs. Further, this study examines relationships among some individual and family characteristics and postsecondary education participation for youth with

disabilities that may be overlaid with Tinto's (1987) work of the characteristics students bring to college. Although this study is helpful, it only examined students identified as requiring "special education services" in high school. Students with physical disabilities, such as those who use wheelchairs but have no other disability impacting their education, did not take part in this study.

Other studies, such as Fenlon's (1992) qualitative study, examined how transition from high school to adult life is experienced and understood by young adults with disabilities from different school districts. Some of the main themes identified by the young adults included hasty and poorly coordinated planning for transition, differing future expectations for young adults with disabilities, and outcomes of unemployment and isolation for most young adult participants with disabilities. Some themes identified by family members included a lack of inclusive educational practices, and benefits of supported employment and community inclusion for young adults with disabilities. The themes identified by service providers included competing professional ideologies and a prevalence of restrictive views on employment and community living opportunities that should be available to young adults with disabilities. Additionally, school personnel responsible for actually determining the transition services were unfamiliar with the adult service language used to describe the anticipated service categories.

Transition for many individuals with disabilities from school to adult life may typically take several years. In Fenlon's study (1992) transition experiences, outcomes, and perceptions of the transition process were examined over a period of one-year that covered the last year of high school and the first months after graduation. It did not reflect the individual's overall transition to college and adult life, which would presumably involve more than one year and include additional outcomes.

Other studies, such as Farbman's (1983), explored the experiences of college faculty, but little research is available in education to show the value assistive technology plays for students with disabilities transitioning from high school to college and successfully graduating. In fact, Farbman's (1983) study showed that assistive technology was rarely used by students with disabilities to increase the benefits of instruction and independent learning on campus.

West, Kregel, Getzel, Zhu, Ispen, and Martin (1993) surveyed forty college and university students with disabilities to determine their levels of satisfaction with accessibility, specialized services, and accommodations at their college or university. Students were requested to identify barriers to postsecondary education and improvement in services. Respondents generally expressed satisfaction with the services that they had received in their schools. However, the majority of the students indicated that they had encountered barriers to their education, including a lack of understanding and cooperation from administrators, faculty, staff, and other students, lack of adaptive aids and other accommodations, and inaccessibility of buildings and grounds.

However, the emergence of technology, particularly specialized assistive technology, as an avenue to dramatically increase the potential for people with disabilities, estimated to benefit between 25 and 45 million people with disabilities (Justesen & Menlove, 1994) has not been examined in the field of higher education and students with disabilities. Furthermore, most studies about students with disabilities that are available are outdated, some conducted twenty years ago. Very few studies have examined physical accessibility or social integration on campuses since the ADA required compliance with all public and private campuses².

² Except campuses owned or operated by a religious entity under the ADA, and campuses owned or operated by a religious entity that chooses not to accept federal financial assistance, such as federal student aid. See the ADA and the U.S. Department of Justice implementing regulations for title II and title III of the ADA.

English (1993) conducted survey research to determine the role of disability support services in the integration and retention of 35 college students with hearing impairments. Participants indicated a higher level of academic integration compared to social integration on their campuses, and a very high commitment to their intention to stay in school. Analysis of the survey results revealed that support services had a direct effect on academic integration, and an indirect effect upon intent to stay in school.

Other studies (Zadra, 1982) indicated that entering freshmen with disabilities most often gathered information about college services through direct contact with the institution or its staff. All students in Zadra's study agreed upon the need for personal counseling. Students who were ambulatory underestimated their need for architectural accessibility, in particular they did not anticipate the need to use ramps, handrails, and curbcuts, which these students found they used regularly. Students, who used wheelchairs, in this study, were accurate in anticipating services needed to attain mobility. This study and others suggested recruitment strategies such as bringing potential freshmen on campus to check facilities prior to enrollment as were pre-registration interviews between college counselors and entering freshmen, and an effective process for obtaining accurate information needs of students with disabilities.

There are a few studies, such as those conducted by Potter (1995), Flowers (1993), and Blake (1992), that have identified whether variables describing academic and social integration would distinguish students with disabilities who dropped out of college and those who persisted among students with disabilities at a large university in the South. Tinto's 1975 model of institutional departure was used as the theoretical foundation for this study. Acceptance of disability was found to be a significant predictor for both academic achievement and academic persistence.

Conclusion

The theoretical models of how college affects students are well developed and there is ample evidence that students do indeed change in a number of positive ways during their college years (Pascarella & Terenzini, 1991). College and university campuses constitute powerful and highly varied settings for student change—developmental and otherwise (Pascarella & Terenzini, 1991).

However, as is shown above, little research has been done on the student change and success of students with disabilities in college and university life. Furthermore, there is also little research to tell us about the best practices to take in the transition from high school to college for students with disabilities. The majority of research remains unavailable to researchers and practitioners because findings are not generally published in journals or presented at conferences where high school and college level service providers can be reached. More research is needed to expand the knowledge base about students with disabilities (Collins, 1995). According to Fairweather and Shaver (1990), little is known about the participation of youth with disabilities in post-secondary education. Previous research has been piecemeal, either focusing on a single state or on youths with a single type of disability (Fairweather & Shaver, 1990).

Further, almost no research into the potential technology has played in increasing integration and persistence to graduation has been done about students with disabilities more than 12 years since the passage of the Technology-Related Assistance for Individuals with Disabilities Act of 1988 was first implemented with incremental funding of each state, and nearly 10 years since the passage of the Americans with Disabilities Act of 1990. In many

instances, appropriate use of technology can modify or circumvent a disability, increasing participation in the benefits of society (Justesen & Menlove, 1994).

Steps GEAR UP Grantees Can do to Help More Students with Disabilities Prepare for College

Based on the research discussed above and the experiences of the GEAR UP staff, the following transition-planning steps for students with disabilities are suggested. These ideas point the way for students to assume major responsibility in identification of goals and aspirations toward achieving a successful educational experience in college or university life.

- Work to increase better understanding and coordination of transition services for high school students with disabilities. Develop successful transition coordination between high school, college, and community service professionals. High school guidance counselors and counselors at local college student disability service centers can learn much about their respective services and the needs of high school students transitioning to college.
- Know the relevant legislation, including IDEA, the ADA, and the Rehabilitation Act of 1973, as amended, so that you can know each student's rights and responsibilities as well as evaluating each individual college or university the student is considering.
- Plan early with each student in his or her high school career for transition to college. Explore the variety of postsecondary education options, including whether and how much specialized support services are provided to students with disabilities. Review entrance requirements, including the types of high school courses required for entrance, and review the college catalog for information about disability support services for students.
- Seek out campuses that provide specialized support services for students with disabilities. Encourage students and their parents to visit and tour prospective campuses while in high school and talk with campus support services for students with disabilities about what services the campus provides and how much experience the campus has with students who have his or her specific type of disability.
- Work with prospective postsecondary institutions early in the transition process to provide the necessary academic support services more frequently and earlier than is often needed by students without disabilities. Help to create positive first experiences for students with disabilities transitioning from high school to college.
- Prepare students with disabilities with advocacy and negotiation skills to enhance their academic success. Work with students to know how, when, and where to discuss and request needed accommodations in courses. The more articulate and precise the student

is about his or her needs, the more successful the student will be at gaining accommodations.

- Provide opportunities for high school students to develop and use social skills. Help students understand the value and importance of using counseling services on their campuses, particularly if he or she encounters barriers or academic difficulties early in their first semester.
- GEAR UP grantees should consider conducting qualitative and quantitative studies and disseminate research findings in journals and present papers at conferences that reach high school and college personnel that have not been exposed to the needs of students with disabilities.

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